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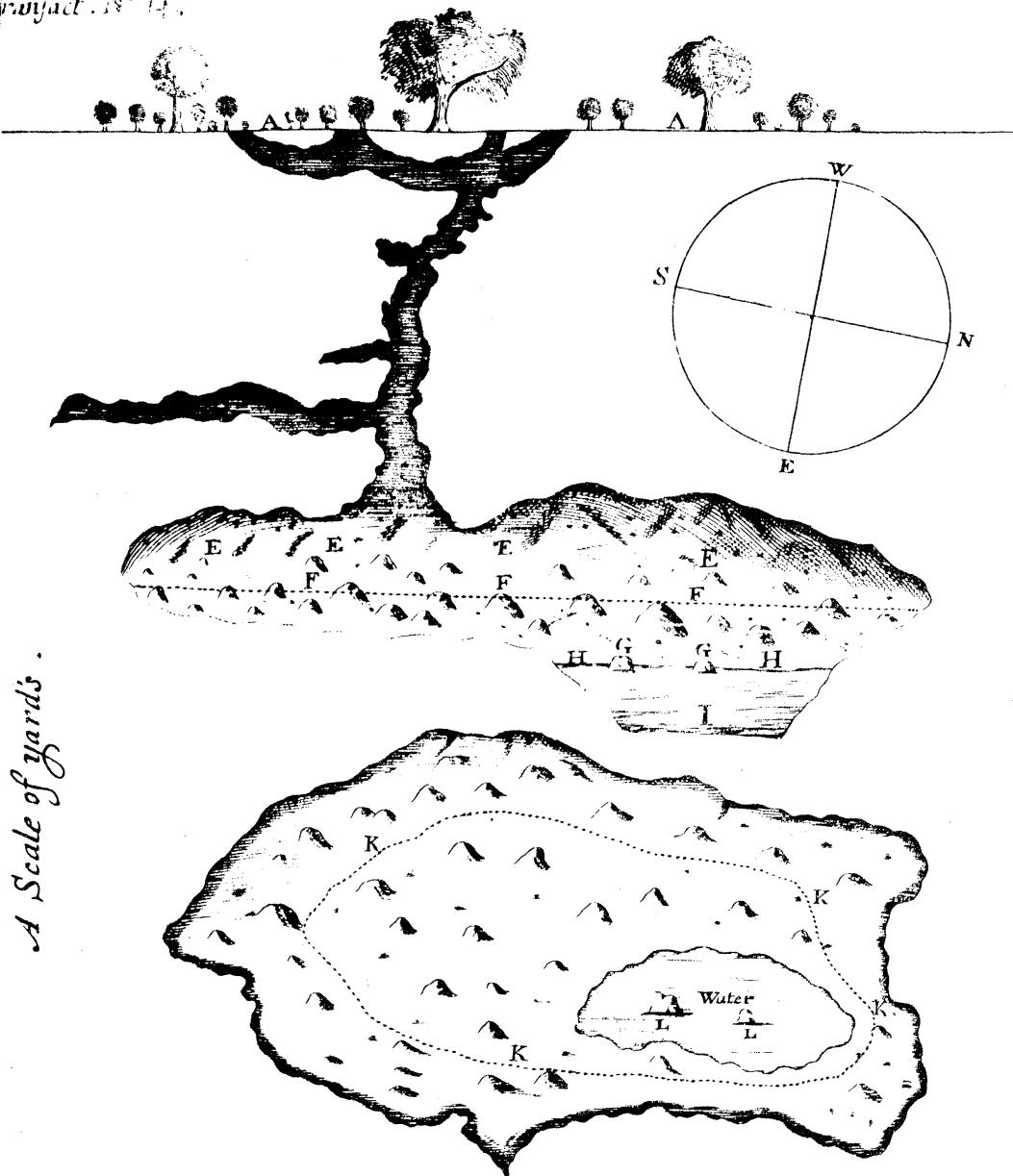
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Engraving No. 14.



A Scale of yards.

fig 2.

The Preface.

ALthough the Writing of these Transactions, is not to be looked upon as the Business of the Royal Society: Yet, in regard they are a Specimen of many things which lie before them; Contain a great Variety of Useful Matter; Are a convenient Register, for the Bringing in, and Preserving many Experiments, which, not enough for a Book, wold else be lost; and have proved a very good Ferment for the setting Men of Uncommon Thoughts in all parts a work: And because, moreover, the want of them for these four last Years, wherin they have been discontinued, is much complained of: That the said Society may not seem now to Condemn a Work, they have formerly encouraged; or to neglect the just Expectations of Learned and Ingerious Men: They have therefore thought fit, to take care for the revival hereof, that they may be Published once every Month, or at such Times, whereof forenotice shall be given at the end of these, and the following Transactions. Neither is it doubted, but that those who desire to be accommodated herewith, will most readily endeavour, themselves, or by others, to supply and keep up that Stock of Experiments, and other Philosophical Matters, which will be necessary hereunto; with this assurance given them, That whatever they shall be pleased to communicate, shall be disposed of with all Fidelity.

Letters for this purpose, may be directed thus, For the Secretary of the Royal Society. To be left with Mr. Hunt at his House in *Whale-b. ne Court*, in *Bell-Alley in Coleman street*; Or, at the Repository in *Gresham College, London*.

A Description of Pen-Park-Hole in Gloucestershire; Communicated by Sir Robert Southwel.

THERE is a place in *Gloucestershire* called *Pen Park*, about three Miles from *Bristol*, and above three from *Severn*, where some *Miners* for *Lead* discovering a large Hole in the Earth: One Captain *Sturmy*, a warm,

inquisitive Sea-man (he has writ a large Folio of Navigation) would needs descend into it, and his Narrative was as followeth :

' Upon the second of July 1669. I descended by
 ' Ropes affixt at the top of an old Lead-Oar Pit, four
 ' Fathoms almost Perpendicular, and from thence three
 ' Fathoms more obliquely, between two great Rocks,
 ' where I found the Mouth of this spacious Place : From
 ' which, a Mine-man and my self lowred our selves by
 ' Ropes twenty five Fathoms perpendicular, into a very
 ' large Place, which resembled to us the form of a
 ' Horse-shoo ; for we stuck lighted Candles all the way
 ' we went, to discover what we could find Remarkable.
 ' At length we came to a River or great Water, which I
 ' found to be twenty Fathoms broad, and eight Fathoms
 ' deep. The Mine-man would have perswaded me, that
 ' this River ebbed and flowed, for that some ten Fathoms
 ' above the place, we now were in, we found the Wa-
 ' ter had sometime been : but I proved the contrary,
 ' by staying there from three hours Floud to two hours
 ' Ebb, in which time we found no alteration of this Ri-
 ' ver. Besides its waters were fresh, sweet and cool, and
 ' the surface of this Water, as it is now at eight Fathom
 ' deep, lies lower than the bottom of any part of the Se-
 ' vern-Sea near us, so that it can have no community
 ' with it, and consequently neither flux nor reflux, but
 ' in Winter and Summer, as all Stagna's, Lakes and Loughs
 ' (which I take this to be) have. As we were walking
 ' by this River thirty two Fathoms under ground, we
 ' discovered a great hollowness in a Rock, some thirty
 ' foot above us ; so that I got a Ladder down to us, and
 ' the Mine-man went up the Ladder to that Place, and
 ' walk'd into it about threescore and ten Paces, till he
 ' just lost sight of me, and from thence chearfully call'd
 ' to me, and told me he had found what he looked
 ' for, a Rich Mine. But his joy was presently changed
 ' into amazement, and he returned affrighted by the
 ' sight of an Evil Spirit, which we cannot perswade him
 ' but he saw, and for that reason will go thither no
 ' more.

' Here

' Here are abundance of strange Places, the flooring
 ' being a kind of a white Stone, enameled with Lead
 ' Oar, and the pendent Rocks were glazed with Salt-
 ' Peter, which distilled upon them from above, and time
 ' had putrified.

' After some hours stay there, we ascended without
 ' much hurt, other than scratching our selves in divers
 ' places by climbing the sharp Rocks. But four days
 ' together, after my return from thence, I was troubled
 ' with an unusual and violent Head-ach, which I impute
 ' to my being in that Vault. This is a true account of that
 ' Place so much talkt of.

This Captain *Sturmy* falling from his Head-ach into a Feaver and dying ; what from his Death, and the Opinion of an Evil Spirit, no body was willing to have any more to do with the said Hole from that time to this.

But Captain *Collins* Commander of the *Merlin* Yeacht (who is by His Maſtety appointed to take a Survey of the Coast of *England*) coming into the *Severn* to that end, and visiting Sir *Robert Southwel* near *Kingrode*, and entertaining him from time to time with the Adventures of his Navigation (having shared in the late Voyage with Captain *Wood* to *Nova Zembla*, and formerly Sayled in the *East Indies* near as high as *Japan*) Sir *Robert* on his part, told him how the story of this *Hole* had amused the Country ; and how the said Narrative had formerly been sent to *His Maſtety* and the *Royal Society* ; and that there wanted only ſome courage, to ſtand out the bottom of it. The Captain preſently reſolved to adventure, and ſo on the 18 and 19th. of *September* 1682. he took ſeveral of his men, with Ropes and Tackling fitting to deſcend, with Lines to measure any Length or Depth, also with Candles, Torches, and a ſpeaking Trumpet.

What he found does much leſſen the Credit and Ter-
 rour of this *Hole*, as will appear by the Figure he took
 thereof, and the Description following :

' 'Tis down the Tunnel from the ſuperficies to the
 ' opening of the Cavity below, 39 Yards. Then the Hole
 ' spreading into an irregular oblong figure, is in the
 ' greatest

'greatest length 75 yards, and in the greatest breadth 41 Yards. From the highest part of the Roof to the water, was then 19 yards. The Water was now in a Pool : at the North end, being the deepest part, it was in length 27 yards, in breadth 12, and only 5 yards and a half deep ; two Rocks appeared above the Water all covered with Mud, but the water sweet and good. There was a large Circle of Mud round the Pool, and far up towards the South end, which shewed that the water has at other times been 6 Yards higher than at present.

The Tunnel or passage down, was somewhat oblique, very Ragged and Rocky ; in some places it was two yards wide, and in some 3 or 4, but nothing observable therein, save here and there some of that Sparr which usually attends the Mines of Lead-Oar. In the way, 30 yards down, there runs in, southward, a passage of 29 yards in length, parallel to the superficies above. It was two and three yards high, and commonly as broad, and alike Rocky as the Tunnel, with some appearances of Sparr, but nothing else in it except a few Bats.

The Cavity below was in like manner Rocky and very irregular, the Candles and Torches burut clear, so as to discover the whole extent thereof ; nor was the Air any thing offensive. The three men that went down the first day stayed below two hours and a half. The next day the Captain went down, with seven or eight men, who stayd below for an hour, and observed all things.

The bottom of this Hole where the Land-waters do gather, is 59 Yards down from the superficies of the Earth, and by good Calculation, the same bottom, is twenty yards above the highest Rising of the Severn, and lyes into the Land, about three miles distant from it.

There was no other need of the speaking Trumpet, than to keep much noise, such as the like Cavity will every where afford, for otherwise those above, and those below, spoke with reasonable freedom unto each other.

*The Profile and Ground-Plot of the Concave in Pen Park,
before described.*

A	<i>The superficies of the Earth.</i>	G	<i>Two small Rocks that appear above the water.</i>
B	<i>The old Lead-Oar Pit.</i>	H	<i>The upper part of the Water.</i>
C	<i>The Tunnel or Passage down.</i>	I	<i>The bottom of the water.</i>
D	<i>The long Gallery.</i>	K	<i>The highest mark of the water.</i>
E	<i>The Concave or Cell.</i>	L	<i>Two Rocks.</i>
F	<i>The upper edge of the Mud.</i>		

An Extract of a Letter, relating an Experiment made for altering the Colour of the Chyle in the Lacteal Veins, by Martin Lister Esq;.

THe passage of the Chyle through the Intestines into the Lacteal Veins, is a thing hitherto demonstrated to the Eye by none. Dr. Lower ingeniously confesseth the ill success he had in trying with Aer, or with tinged Spirit of Wine ; by neither of which he was able to force a passage. And *J. Walaeus (Epist.de motu Chyl.)* is very positive, that however the Chyle in the Intestines may be diversly coloured ; yet it is still white in the Lacteal Veins. And *Diemerbroek* in his late Anatomy Published 1672. (p. 37.) affirms, *Chylum semper album inveniri in Vasis Lacteis Mesentericis & Thoracicis -- viridem vero rubrum alteriusve coloris, in iis a nemine habens vim suisse.*

Notwithstanding which, and my own former unsuccessful Tryals (*Phil. Trans. Numb. 95.*) I did not doubt but that some happy Experiment would shew the contrary ; and a purposely coloured Chyle might find admittance into the Lacteal Veins though not by force, yet by the Consent and Introduction of Nature herself. The success of some late Experiments I made to this purpose, I shall here acquaint you with.

Ex-